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ABSTRACT

This study explores the effect of visual stimuli on second language vocabulary development. An experiment performed at Georgetown University postulates the hypothesis that concrete target words learned through translation and visual aids should offer better learning than the same words learned through translation alone. Findings are determined through a comparison of the immediate memory span of the two randomly selected groups of students. Methods, scores, and results are discussed. Concluding remarks focus on the value of audiovisual aids in language instruction. (RL)

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VISUAL AIDS AND LANGUAGE LEARNING
An Experimental Study

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The present experiment was conducted in June, 1970, by the writer at Georgetown University, Washington, D.C. The purpose was to ascertain which of the following two methods, besides live situations, would be better for vocabulary learning in a target language, which in the present case is Chinese:

(1) Learning through translation alone.

(2) Learning through both translation and pictures.

Hypothesis

With the assumption that the behavioral attention to a given stimulus is in proportion to the degree of intensity of that stimulus toward eliciting responses, the hypothesis is that there is a difference of stimulus intensity in relation to vocabulary learning. Therefore, if there is any difference between the stimuli intensity from the objects, then, the more intense the accompanying stimulus the vocabulary offers, the better the learning. The hypothesis postulates specifically that

(1) concrete target words learned through translation and visual aid should offer better learning than

(2) the same words learned through translation alone.

The findings are to be sought by comparing the immediate memory span[1] of two groups of subjects randomly selected from among the college

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students at Georgetown and randomly divided into two groups of 15 each:

(A) Group A is called the "control group" and used the translation method alone.

(B) Group B is called the "experimental group" and used the translation method plus visual aid.

Materials

In this experiment, the vocabulary consists of ten concrete Chinese words. The same words were used for both groups, and the words were written in Wade-Giles' romanization, each on a card of 3'x5' on which the English translation was also given for both groups A and B. A picture of each item was added for group B only. The ten Chinese words in romanization are as follows:

1.	ma	'horse'
2.	niu	'ox'
3.	kou	'dog'
4.	yang	'sheep'
5.	kung-chi	'rooster'
6.	shan	'mountain'
7.	shu	'tree'
8.	ch'i-ch'e	'automobile'
9.	fei-chi	'airplane'
10.	huo-ch'e	'train'

Method of Presentation

In the aural-oral and visual presentation of the material to the subjects, the following procedures were adopted throughout the experiment.

(1) The test was administered individually with the subject sitting beside the experimenter. The cards containing the units of

material mentioned above were separated accordingly for groups A and B and were shown to the subject at the rate of one card every three seconds.

(2) All units of material plus their English translation were read by the experimenter and recorded on a tape recorder at a speed fixed by a metronome, to insure uniformity of utterance and rate of presentation.

(3) Before the presentation the subject was instructed about the procedure of presentation of the items and his reproduction afterwards. He was given a warning signal two seconds before the presentation of the first item of the series. The same order was followed for all subjects.

Method of Reproduction

(1) After the whole series of items was read and accompanied by cards showing romanization and English translation for group A, or accompanied by cards showing romanization, English translation and pictures for group B, the subject was then asked to identify by oral translation each of the items which were repeated in Chinese only through the tape recorder but in a different order.

(2) The speed of reproduction was three seconds per unit.

(3) The score of each subject was given by the experimenter in a discreet manner so that the subject could not see it.

Scores of Both Groups

The score of each subject of the two groups is shown in the following list:

Group A "Control"		Group B "Experimental"	
Subjects	Scores	Subjects	Scores
A	5	I	4
B	3	II	6
C	7	III	6
D	4	IV	7

Group A "Control"		Group B "Experimental"	
Subjects	Scores	Subjects	Scores
E	5	V	4
F	5	VI	6
G	6	VII	5
H	5	VIII	5
I	6	IX	7
J	6	X	5
K	4	XI	7
L	6	XII	7
M	4	XIII	7
N	6	XIV	5
O	5	XV	5

The percentage of the mean score of each group is as follows:

Group A: 51.3% vs. Group B: 57.3%

The result of the experiment seems to support the hypothesis behind this study, namely, that the more intense the accompanying stimulus, the better the vocabulary learning. Since the number of subjects and material covered were very limited, the experiment certainly does not yield categorically affirmative results in favor of the above hypothesis. Nevertheless, the superior scoring of the experimental group is significant. More extensive experimentation of this kind should be conducted, and more investigation should be carried out in order to obtain more satisfactory and conclusive evidence.

A Plea for more Intensive Use of Visual Aids

At this point, the writer would like to add a few words concerning the use of visual aids in language teaching and language learning, a

method which seems, thus far, not sufficiently emphasized or used. Since there is an insistence on the desirability of learning a foreign language in situations which simulate "real-life" communication situations as closely as possible,[2] the visual aids are meant to make the learning process close to life-like situations, and the rational of visual techniques is actually based on the multi-sensory processes, simulating life-like situations. A psycho-linguistic test conducted by Dr. R. Seashore confirms, in effect, the theory that live situations or life environments are most favorable to language learning.[3]

However, by the use of visual aids in language teaching and language learning, I do not mean the elementary fashion as employed in the present experiment but rather the more sophisticated and more efficient audio-visual materials, such as filmstrips (accompanied by a tape-recorder), closed-circuit TV, motion pictures, and even the revolutionary cartridge video recorders (instavision) and cartridge TVs (Cartrivision).

Among these visual aids the filmstrip is the most economical to use and, nevertheless, is a fairly efficient aid for language learning purposes. Aside from its life-like pictures, it also allows us to pick a sequence of pictures that will demonstrate and drill the structural point which we want to teach at that time. Since the pictures would be made according to linguistic specifications, we can be sure that the structural points we want to teach would appear in the visual material. Furthermore, the tape accompanying the filmstrip may be made so as to leave a pause for the student to repeat, or responde accordingly to what he has heard. In the opinion of the writer filmstrips made for a target language, structurally constructed, can be a very effective teaching device among the other visual aids. They are perhaps second only to a good teacher.

FOOTNOTES

1. Robert Lado, "Memory Span as a Factor in Second Language Learning" in International Review of Applied Linguistics, III, 2, (1965), 123-129.

2. Wilga M. Rivers, The Psychologist and the Foreign Language Teacher, (Chicago and London: The University of Chicago Press, 1964), p. 13.

3. R. Seashore, "How Many Words Do Children Know?" in Heath's Service Bulletin for Elementary Teachers, II, 2, (Boston: D.C. Heath and Company, 1947), 3-17. In his report Seashore revealed the actual bulk of the vocabulary possessed by the following levels of students, most of which was being learned outside classrooms. According to him, first-graders have a vocabulary or some 16,900 basic words, and twelfth-graders know some 46,500 basic words and 80,000 basic and derived words.